

### **REMARKS**

Upon entering the above amendments, claims 1-5, 7-13, and 15-16 will be pending with claims 1 and 9 being independent. Claims 1, 2, 8, 9, 10 and 16 have been amended and claims 6 and 14 have been canceled. No new matter has been added. Reconsideration and allowance of the above-referenced application are respectfully requested.

#### **Claim Objection**

Claim 1 is objected to because the word "is" is allegedly required as an addition to the phrase "the data necessary." This objection is traversed.

This objection should be withdrawn as the objection is without legal justification and the language is within the discretion of language to be used in a claim. The objection is without legal justification as no law, rule, or guidance from the MPEP is cited for allowing such an objection. In addition, the claims are not lacking clarity and latitude is to be given to the form of expression, as

"Some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire. **Examiners** are encouraged to suggest claim language to applicants to improve the clarity or precision of the language used, but **should not reject claims or insist on their own preferences** if other modes of expression selected by applicants satisfy the statutory requirement." MPEP 2173.02 (emphasis added).

And, the phrase "the data necessary" is proper. Data is a noun. "[N]ecessary to..." appears to be an adjectival phrase. The use of an adjectival phrase after a noun is an allowable form of expression in the English language. See, e.g., "Wikipedia: Adjectival Phrase" ([http://en.wikipedia.org/wiki/Adjectival\\_phrase](http://en.wikipedia.org/wiki/Adjectival_phrase)). For example, "bin" is a noun and "full of toys" is an adjectival phrase, where "full" is normally an adjective. "The bin full of toys" is acceptable, as might be "the bin is full of toys." Thus, the objection should be withdrawn.

#### **Rejections under 35 USC § 103**

Claims 1-16 stand rejected under 35 USC § 103(a) as being unpatentable over a combination of two or more of Arras et al. (U.S. Pub. No. 2006/0010147; "Arras"), Rys et al. (U.S. Pub. No. 2003/0101194; "Rys"), Zuk (U.S. Pub. No. 200410199535; "Zuk"), Singh (U.S.

Pub. No. 2002/0152219; "Singh"), and Koskas (U.S. Pub. No. 2002/0093522; "Koskas"). These rejections are traversed.

Independent claims 1 and 9, are allowable as neither cited reference (Arras and Rys) discloses the combination of features of these claims. Also, the combination of Arras and Rys is not obvious.

Arras and Rys Do Not Disclose Features of the Independent Claims

Claims 1 and 9 include a combination of features that may result in an enhanced performance for responding to a query. As amended, claims 1 and 9 include features directed to blockwise processing of data that may be compressed. For example, amended claim 1 recites, in part:

filtering a first block of the data based on the query to generate a list of results for the first block;

buffering at least one key figure corresponding to a result in the list of results of the first block, the buffering of the least one key figure based at least in part on the result being in the list of results;

buffering compressed values representing at least one dimension value corresponding to each key figure being one of the at least one key figures;

aggregating the compressed values representing the dimension values corresponding to the each key figure to generate an aggregate key;

aggregating key figures corresponding to the same aggregate key to generate one or more aggregate key figures;

storing the aggregate key figures and aggregate keys;

performing the filtering, buffering, and aggregating for a second block of the data;

merging aggregate key figures of the first and second blocks of the data. (emphasis added).

The process may optimize memory resources by filtering, buffering, and aggregating a block of memory at a time, and then merging aggregate key figures. For example, a block of results may fill memory and by processing a block of data at a time, virtual memory resources might not be used, which may advantageously reduce overhead associated with virtual memory. In combination with the blockwise processing, dimension values may be represented by

compressed values, which may improve overall processing in some implementations by having values compressed in lieu of using memory resources to store large dimension values.

In contrast to a combination of potential optimizations that may allow for a quick table scan of data to provide a result to a query, Arras discloses pivot views based on sequence vectors. Arras does not disclose the combination of features of the independent claims. Nor does Arras provide results to a query.

In addition, alleged features of Arras are not in Arras and would not be obvious. For example, Arras is alleged to include buffering of key figures. However, what little citation is given for this alleged disclosure does not disclose this feature. For example, paragraph 0047 of Arras recites:

[0047] It is assumed herein that the real facts quantity includes data keys, each data key defining a key dimension, and data values contained in each key dimension. A pivot view of that facts quantity is given by user-chosen ordered arrangement of the key dimensions, the arrangement of the key dimensions in a presented dimension of the pivot view and a possible aggregation level, as illustrated in more detail in the following.

Yet, there is no reason to believe that this involves the buffering of key figures of the present claims. For example, amended claim 1 recites, in part:

buffering at least one key figure corresponding to a result in the list of results of the first block, the buffering of the least one key figure based at least in part on the result being in the list of results.

In addition, Rys does not include features of the amended claims. Rys discloses loading of hierarchical data into a database system. Abstract. Rys does not involve aggregating key figures and dimension values, let alone blockwise processing of that data. What little disclosure of SQL exists is superficial and involves formatting data in accordance with an SQL format, performing SQL against a view, and SQL loading of data. See, e.g., Rys, ¶¶ 0007, 0033, and 0057. Those features are unrelated to the claimed subject matter, as their focus is on loading XML data and the claims are directed to responding to a query. For example, Rys is alleged to disclose filtering a dataset based on a query to generate a list of results. However, the alleged disclosure at paragraph 0057 merely appears to disclose loading XML data:

[0057] Bulk Load accomplishes the shredding process "in situ", that is, it must interpret the hierarchical data, e.g., XML data, determine the destination SQL target fields and

tables, and pass the resultant records to the server--all as it is encountering the XML data in the input stream. This is contrast to other XML to SQL insertion mechanisms such as Updategrams, which can load the entire sql:before and sql:after images of the data into memory, run an analysis on it to determine the affected records, then issue a sequence of SQL statements to effect the change. In order to work similar to Updategrams, Bulk Load would have to load the XML file and create the in-memory DOM for the data set. This is expensive for data sets involving thousands, or perhaps even millions, of records.

Thus, as features of the claims are not recited in independent claims 1 and 9, these claims should be allowed.

The Combination of Arras and Rys is Not Obvious

The combination of Arras and Rys is not obvious because there is no motivation to combine their teachings in a way that would result in the claimed subject matter. As discussed above, Rys has little, if anything, to do with responding to queries. Rys is focused on loading XML or other hierarchical data into a database, which may have an incidental involvement of SQL, but has little, if any, involvement of disclosing how to respond to SQL queries. Arras is also not directed to responding to queries, as Arras is focused on providing pivot views thru the use of sequence vectors. There is no reason to believe that the pivot views of Arras would be combined with the hierarchical loading of Rys. Even if the two were combined, they would not result in the presently claimed subject matter. Thus, the claims are not obvious in view of Arras and Rys.

As claims 2-5 and 6-9, and 10-13 and 15-16; depend directly, or indirectly, on claims 1 and 9, these claims are also allowable for at least the reasons given above.

CONCLUSION

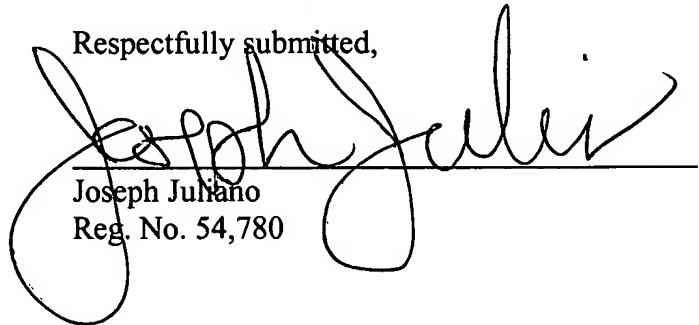
It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of

unpatentability of the claim prior to its amendment. Applicant asks that all claims be allowed.

If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below. Applicant is concurrently filing herewith a Petition for a two-month extension of time together with a check in the amount of \$450.00. The Commissioner is hereby authorized to charge any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 34874-085.

Date: January 11, 2007

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph Juliano", is written over a horizontal line. The signature is fluid and cursive.

Joseph Juliano  
Reg. No. 54,780

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